

## REPORT ON STEAM RECIPROCATING ENGINE, MACHINERY.

Received at London Office 10 MAY 1934  
 Date of writing Report 19 When handed in at Local Office 10 MAY 1934 Port of Liverpool  
 No. in Survey held at Birkenhead Date, First Survey 25<sup>th</sup> Oct /33. Last Survey 9<sup>th</sup> May 1934  
 Reg. Book. on the Steel S.S. "TULIP" (Number of Visits 3)  
 Built at Ladbroke (Hamp) By whom built T. A. Walker Yard No. Tons { Gross 409  
 Engines made at Newbury By whom made Plenty & Sons. Engine No. When built 1897  
 Boilers made at Stockton-on-Tees. By whom made Riley Bros. Boiler No. When made 1897  
 Registered Horse Power Owners Grayson, Rolfe & Brown Bros., Ltd. Port belonging to Liverpool.  
 Nom. Horse Power as per Rule 2070 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.  
 Trade for which Vessel is intended Petroleum Sludge Vessel For service in River Mersey & at Holyhead.

ENGINES, &c.—Description of Engines Vertical Triple expansion reciprocating Revs. per minute 90  
 Dia. of Cylinders 13", 23" & 34" Length of Stroke 22 1/2" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 6" as fitted 6 1/4" Crank pin dia. 6 1/4" Crank webs Mid. length breadth 8 1/4" Thickness parallel to axis solid  
 Intermediate Shafts, diameter as per Rule as fitted Thrust shaft, diameter at collars as per Rule 6" as fitted 6 1/4"  
 Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 6 1/4" Is the { tube } shaft fitted with a continuous liner { No }  
 Bronze Liners, thickness in way of bushes as per Rule 1/2" as fitted 9/16" Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes  
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners lapped Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No If so, state type Length of Bearing in Stern Bush next to and supporting propeller 25 1/2"  
 Propeller, dia. 7'6" Pitch 13'0" No. of Blades 4 Material Cast Iron whether Moveable No Total Developed Surface 25.2 sq. feet  
 Feed Pumps worked from the Main Engines, No. 1 Diameter 3" Stroke 10" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 3" Stroke 10" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size 1-6" x 4" x 6" Duplex. How driven Steam } Pumps connected to the { No. and size 1-7 1/2" x 5" x 6" Duplex. 1-3" x 10" How driven steam. main engine. }  
 Ballast Pumps, No. and size 1-7 1/2" x 5" x 6" Duplex. Lubricating Oil Pumps, including Spare Pump, No. and size 1-3" x 10"  
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 4-3" hose In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-3" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges No  
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line above  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes  
 What Pipes pass through the bunkers None How are they protected  
 What pipes pass through the deep tanks 4-3" hose Have they been tested as per Rule Yes  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 1307  
 Is Forced Draft fitted No No. and Description of Boilers One cylindrical single-ended Working Pressure 150 lbs.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting 20/10/33 Main Boilers Yes Auxiliary Boilers Donkey Boilers  
 (If not state date of approval)  
 Superheaters General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

## SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes.  
 State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.



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004906-004917-0017



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Dates of Survey while building

During progress of work in shops - - ✓

During erection on board vessel - - ✓

Total No. of visits

Dates of Examination of principal parts—Cylinders 9/11/33 Slides 9/11/33 Covers 9/11/33

Pistons 9/11/33 Piston Rods 9/11/33 Connecting rods 9/11/33

Crank shaft 9/11/33 Thrust shaft 9/11/33 Intermediate shafts ✓

Tube shaft ✓ Screw shaft 16/11/33 Propeller 25-10-33

Stern tube 25-10-33 Engine and boiler seatings 9/11/33, 30/10/33 Engines holding down bolts 9/11/33

Completion of fitting sea connections 9/11/33

Completion of pumping arrangements 30/11/34 Boilers fixed ✓ Engines tried under steam 26/11/34

Main boiler safety valves adjusted 9-5-34 Thickness of adjusting washers Port 1/32 Start 1/4

Crank shaft material Steel Identification Mark ✓ Thrust shaft material steel Identification Mark ✓

Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material Steel Identification Mark ✓ Steam Pipes, material Solid drawn copper Test pressure 300 lb Date of Test 15/12/33

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

Have the requirements of the Rules for the use of oil as fuel been complied with yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ✓ If so, have the requirements of the Rules been complied with ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery duplicate of a previous case ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been examined, repairs have been carried out as found necessary, pumping arrangement altered & oil fuel installation fitted in accordance with rule requirements and approved plans.

See also Rpt. 9.

The amount of Entry Fee ... £ :  
 Special ... £ 20 : -  
 Donkey Boiler Fee ... £ :  
 Travelling Expenses (if any) £ :

When applied for,  
 11 MAY 1934

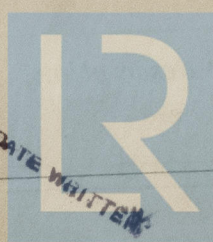
When received,  
 26/5/34

Committee's Minute

Assigned

LMC S: 34  
 Fitted for oil fuel S: 34  
 F.P. above 150°F.  
 25.11.33. Elec. light.

H.R. Howells & J. S. Millin  
 Engineer Surveyor to Lloyd's Register of Shipping.



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